

In re Patent Application of:
RAYNOR ET AL.
Serial No. 09/993,387
Filing Date: NOVEMBER 16, 2001

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REMARKS

Applicants would like to thank the Examiner for the thorough examination of the present application. The independent claims have been amended to more clearly define the present invention over the cited prior art references as helpfully suggested by the Examiner. The claim amendments and arguments supporting patentability of the claims are provided below.

I. The Amended Claims

The present invention, as recited in amended independent Claim 11, for example, is directed to a solid state imaging device comprising a two-dimensional array of pixels defining an image plane. The image plane comprises at least three rows of pixels for each color that the solid state imaging device is designed to be sensitive to. The solid state imaging device further comprises readout electronics comprising at least one store circuit laterally adjacent the image plane for reading signals therefrom, and a multiconductor signal bus is connected between the array of pixels and the readout electronics. The multiconductor bus comprises a respective conductor to provide a dedicated readout channel for only one pixel of the two-dimensional array of pixels defining the image plane.

Independent Claim 30 is a method counterpart of Claim 11 and has been similarly amended. Independent device Claim 21 has also been similarly amended.

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II. The Claims Are Patentable

The Examiner rejected independent Claims 11, 21 and 30 over the Applicants' Admitted Prior Art in view of the Lee et al. patent. The Applicants' Admitted Prior Art, as shown in FIG. 5, comprises a two-dimensional array of pixels defining an image plane, with the image plane comprising two rows of pixels. Readout electronics is laterally adjacent the image plane for reading signals therefrom. A multiconductor signal bus is connected between the array of pixels and the readout electronics, wherein the multiconductor bus comprises a respective conductor to provide a dedicated readout channel for only one pixel of the two-dimensional array of pixels defining the image plane.

As correctly noted by the Examiner, the Applicants' Admitted Prior Art in FIG. 5 fails to disclose that the readout electronics comprises at least one store circuit. The Examiner cited the Lee et al. patent as disclosing this deficiency. The Examiner has taken the position that it would have been obvious at the time of the invention to modify the Applicants' Admitted Prior Art in FIG. 5 in view of the Lee et al. patent.

The Applicants submit that even if the prior art references were selectively combined as suggested by the Examiner, the claimed invention is still not produced. As helpfully suggested by the Examiner, independent Claim 11 has been amended to recite that the image plane comprises at least three rows of pixels. This defines over the Applicants' Admitted Prior Art in FIG. 5.

In addition to the image plane comprising at least

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three rows of pixels, independent Claim 11 has been amended to also recite there are at least three rows of pixels for each color that the solid state imaging device is designed to be sensitive to. In the case of a monochrome image sensor, the size of the image plane is at least three rows of pixels, but in the case of a RGB color sensor where three colors are sensed, the size of the image plane is at least nine rows of pixels. This defines over the prior art linear array having three rows, one for each color, as mentioned by the Examiner.

Accordingly, it is submitted that amended independent Claim 11 is patentable over the Applicants' Admitted Prior Art in view of the Lee et al. patent. Amended independent Claims 21 and 30 are similar to amended independent Claim 11. Therefore, it is submitted that these claims are also patentable over the Applicants' Admitted Prior Art in view of the Lee et al. patent.


In view of the patentability of amended independent Claims 11, 21 and 30, it is submitted that the dependent claims, which include yet further distinguishing features of the invention are also patentable. These dependent claims need no further discussion herein.

III. CONCLUSION

In view of the amendments to the claims and the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

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Respectfully submitted,



MICHAEL W. TAYLOR
Reg. No. 43,182
Allen, Dyer, Doppelt, Milbrath
& Gilchrist, P.A.
255 S. Orange Avenue, Suite 1401
Post Office Box 3791
Orlando, Florida 32802
407-841-2330

CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence
has been forwarded via facsimile number 571-273-8300 to the
Commissioner for Patents on this 15 day of February, 2007.

